DOCUMENT RESUME

ED 198 407 CG 014 924

AUTHOR Reynolds, William M.: And Others
TITLE Measurement of Academic Self-Concept in College Students.
PUB DATE Sep 80
NOTE 7p.: Paper presented at the Annual Convention of the American Psychological Association (88th, Montreal, Quebec, Canada, September 1-5, 1980).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement: Academic Aspiration: Affective Measures: College Students: Correlation: Grade Point Average: Higher Education: *Self Concept Measures: Self Esteem: *Student Characteristics: *Test Reliability: *Test Validity
IDENTIFIERS *Academic Self Concept Scale: *Rosenberg Self Esteem Scale

ABSTRACT

Academic self-concept has been viewed by numerous investigators as an important facet of general self-concept. The Academic Self-Concept Scale (ASCS) was developed as a measure of academic self-concept in college students. The initial item pool consisted of 59 items worded to conform to a four-pont Likert-type response format: On the basis of responses from 427 college students, the final form of the ASCS was constructed consisting of 40 items with an estimated internal consistency reliability of .91. Validity was established by correlating the ASCS with grade point averages (GPAs) of students and their scores on the Rosenberg Self-Esteem Scale. A multiple regression analysis of the ASCS with GPA and Rosenberg scores as predictor variables resulted in a multiple correlation of .64. These and other data lend support to the reliability and validity of the ASCS as a measure of academic self-concept. (Author)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED198407

Measurement of Academic Self-Concept in College Students

William M. Reynolds
University of Wisconsin-Madison

Maria P. Ramirez, Antonio Magrina and Jane Elizabeth Allen
State University of New York-Albany

Paper presented at the Annual Meeting,
American Psychological Association
Montreal, Canada September 1980

CG 014924

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

William M. Reynolds

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Measurement of Academic Self-Concept in College Students

Academic self-concept has been viewed by numerous investigations as an important facet of general self-concept (Brookover, Paterson, and Thomas, 1962; Shavelson, Hubner, & Stanton, 1976). The relative importance of academic self-concept to the overall affective status of the individual is dependent in part on situational and environmental variables. An individual in a school setting is more likely to demonstrate a greater concern with academic self-concept than with physical self-concept.

Within college settings, individuals (students) receive reinforcement for achieving at specified academic levels. The primary source of such reinforcement is course grades. Although each individual sets an internal standard at which positive reinforcement occurs, in general a grade of A is viewed more positively than a grade of B or C. Positive reinforcement is viewed as enhancing academic self-concept, whereas the lack of reinforcement or negative reinforcement (e.g., a very low grade) will tend to lower academic self-concept. The purpose of this study was to report the initial development and validation of a measure designed to assess academic self-concept of college students.

Method

Subjects

Participants were 427 students from two colleges in upstate New York. Approximately 40 percent of the subjects were male; 60 percent, female. The students represented a wide range of discipline majors. With regard to year in college, 15 percent were freshman; 33 percent, sophomores;

34 percent, juniors; and 18 percent, seniors. Subjects reported a mean grade point average (GPA) of 3.03 (SD = .45) on a five-step scale in which a grade of A was 4.0. For the sample the mean Verbal score of the College Board Scholastic Aptitude Test (SAT) (Educational Testing Service, 1948-1980) was 541.06 (SD = 82.97), and the mean Mathematics score of the SAT was 579.21 (SD = 80.85).

Scale Development

Item Development

Based on a review of studies examining various aspects of academic self-concept and of instruments developed to assess general self-concept, a set of 59 items was developed which were considered to sample the domain of academic self-concept. Items were worded to conform to a Likert-type scale using a four-point (strongly disagree to strongly agree) response format. These 59 items constituted the initial form of the Academic Self-Concept Scale (ASCS). As the primary purpose of the scale development was to obtain a set of homogeneous items, a domain sampling model was used to generate item content. An item - total score correlation of .30 was selected as a minimum level for item inclusion.

Validation Measures

As the ASCS was developed as a measure of an academic facet of generalized self-concept, the major expectation was that it would correlate significantly with measures of academic success and general self-concept. Academic success was measured in terms of GPA. As a measure of general self-concept, the Rosenberg (1965) Self-Esteem Scale was employed. Widely used, the Rosenberg scale is an accepted measure of general self-concept

(Robinson & Shaver, 1973). In the current study the internal-consistency reliability estimate of the Rosenberg scale was .82 (Cronbach, 1951).

Procedure

Prior to being tested in class the subjects were told that their participation in this study was voluntary. They were not informed as to the specific nature of the measures they were responding to.

Results

Reliability

On the basis of item - total scale correlations, corrected via Cureton's (1966) technique, 19 items were eliminated. The result was a 40-item scale. The estimate of internal-consistency of the 40-item scale based on Cronbach's (1951) coefficient alpha was .91. The scores approximated a normal distribution with an overall mean of 105.82 (SD = 13.41, skewness = .05) and a median of 106.22. The average item mean was 2.64 as compared to the physical scale mean of 2.50.

Validity

Validity of the scale was established in terms of correlations between ASCS and (a) GPA and (b) scores on the Rosenberg scale. The ASCS correlated .40 ($p < .001$) with GPA and .45 ($p < .001$) with the Rosenberg scale. The Rosenberg scale was correlated - .01 with GPA. A multiple regression analysis of the ASCS with both GPA and Rosenberg scores as predictor variables resulted in a multiple correlation of .64 ($F = 81.82$, 2/230, df, $p < .001$). The R was .42. When the Total score on the SAT was added to the regression equation, the multiple R^2 increased to .67. The correlation between the ASCS and SAT Total score was .22 ($p < .001$).

Conclusions

The data collected indicated that the ASCS shows promise as a reliable and valid measure of academic self-concept. The validity data suggested that the ASCS measures a facet of general self-concept specific to an academic self-attitude. The substantially lower relationship found between the ASCS and SAT scores attests to the fact that the ASCS is an academic rather than an aptitude dimension of self-concept. The development of the ASCS is consistent with the multifaceted structure of self-concept postulated by Shavelson, et al. (1976). The ASCS may become a useful tool for research with college populations as well as a measure appropriate for clinical use by college counselors.

References

Brookover, W. B., Paterson, A., & Thomas, S. Self-concept of ability and school achievement. USOE Cooperative Research Report, Project No. 845, Michigan State University, 1962.

Cronbach, L. J. Coefficient alpha and the internal structure of tests. Psychometrika, 1951, 16, 297-334.

Cureton, E. E. Corrected item - total correlations. Psychometrika, 1966, 31, 93-96.

Educational Testing Service. College Board Scholastic Aptitude Test. Princeton, NJ: Author, 1948-1980.

Robinson, J. P., & Shaver, P. R. Measures of social psychological attitudes. Ann Arbor, Michigan: Survey Research Center, Institute for Social Research, University of Michigan, 1973.

Rosenberg, M. Society and the adolescent self-image. Princeton, NJ: Princeton University Press, 1965.

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. Self-concept: Validation of construct interpretations. Review of Educational Research, 1976, 46, 407-441.